SPLASH DRONE
PRO

Splash Drone Quick Guide

V1.0

SwellPRO™
www.swellpro.com
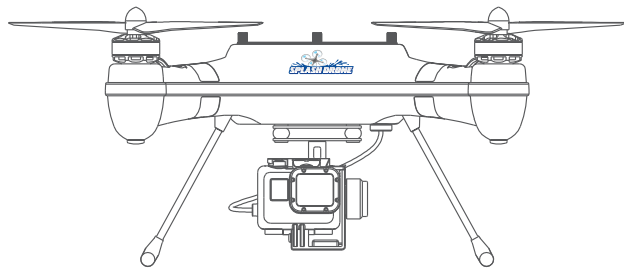
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Splash Drone PRO
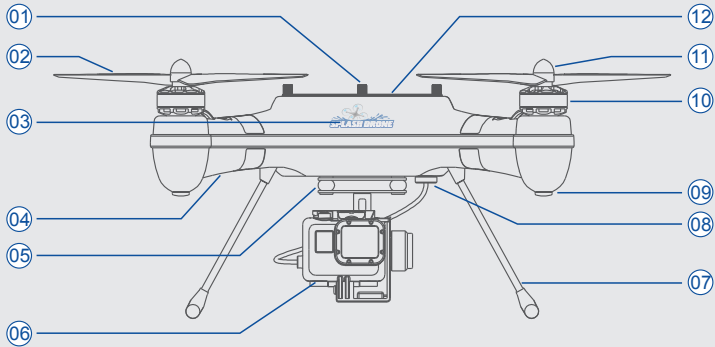
1. Cover screw
2. Prop
3. Aircraft Nose
4. Flight Indicator LED
5. Gimbal Damper ball
6. Waterproof Gimbal
7. Land Gear
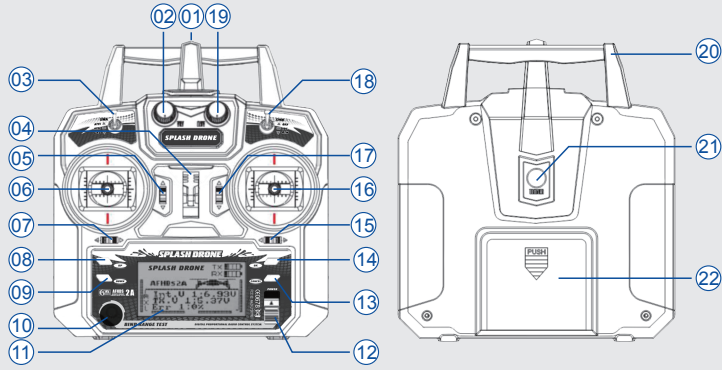8. Seal Screw
9. Rubber Root
10. Motor
11. Prop Nut
12. Seal Cover

Remote Controller

1. Antenna
2. VRA
3. Switch A(SWA)
4. Hanger
5. Left trims
6. Left Stick
7. Left trims
8. Up Key
9. Down Key
10. Binding Key
11. LCD Display
12. Power Switch
13. Cancel Key
14. OK Key
15. Right trims
16. Right Stick
17. Right trims
18. Switch B(SWB.
19. VRB
20. Handle
21. Trainer Jack
22. Battery cover

Safety Guide

1. Obey relevant regulations of the International Civil Aviation Organization and local airspace control law and UAV management rules. Forbid flying in any no-fly zones.
2. When flying the Splash Drone always keep it in an open area without buildings, trees and obstacles.
3. Keep 3-5 meters away from you and others. Do not operate close to crowds.
4. Before flight need calibrate the aircraft and Remote Controller
5. If detect abnormal operation while using the Splash Drone and/or remote controller please stop using immediately
6. Before flight, ensure the propllers are installed in correct direction and firmly on motor
7. Do not attempt to touch the motor until motors stop rotating .
8. If use WiFi Sport camera with aircraft. please disable WiFi function before flight. Wifi should not be used in the area of flying.
9. If aircraft has low battery, land immediately to avoid damage.
10. Do not move aircraft for 6-10 seconds after powering on aircraft.
11.If loss of radio signal occours, aircraft will enter into Auto Return Home mode automatically ; If signal is received again, please switch to GPS mode control aircraft.

Forbidden flight conditions:
a. Forbid flying nearby strong radio interference activity areas.
b. Forbid flying nearby any crowds.
c. Forbid flying in extreme weather, like heavy rain, thunderstorms or conditions causing poor visual range
d. Forbid flying around strong magnetic fields
e. Forbid flying when you are tired or affected by alcohol.
f. Forbid flying when remote controllor can not control aircraft due to any other reasons


TURNING REMOTE ON
Quick Guide

1. First Start:

a. Check that all parts are in good condition and installed properly.
b. Ensure that remote control batteries are full
c. Calibrate Splash Drone and remote control (only during initial set-up)

2. Powering on remote control

a. Place SWA and SWB swith to the UP position.
b. Power up remote control
c. A safety beeping sound will start. Move throttle joystick down once. This will stop the beeping sound. The remote is now ready.
NOTE: Ignore the warning sign on the control LED.
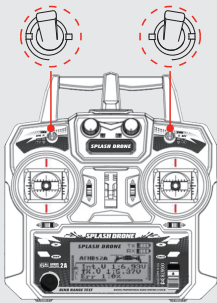
3. Splash Drone PRO set up.

a. Land Gear

Insert land gear to the bottom of the Splash Drone PRO aluminum brackets and ensure installation is firm.
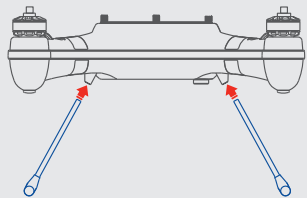
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Suggestion Installation

Gimbal controller board
Flight controller
Receiver
Battery
Video transmitter
GPS
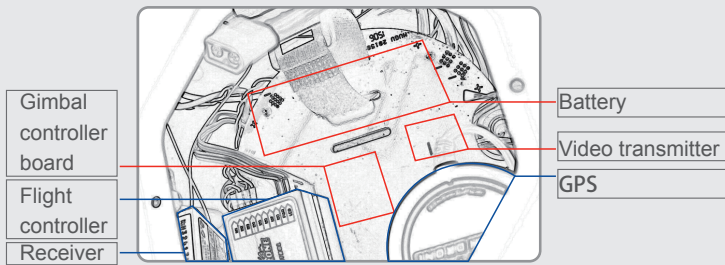
b. Gimbal

1. Uninstall the seal screw that comes installed.

2. Push VTX cable(3PIN), IMU cable(4PIN), Gimbal Roll direction control cable M1 (3PIN) and Gimbal Pitch direction control board M2(3PIN) through the hole and tighten seal screw fix firmly.

3. VTX. IMU. M1. M2 cable connect to the VTX module and gimbal control board corresponding ports as labelled.

4. Gimbal board power cable connects with main board "12V Out JST", pitch control (green cable) connects to receiver CH5. Roll control (blue cable) connects to receiver CH6. Ground (black cable) connects to CH5 or CH6 ground port

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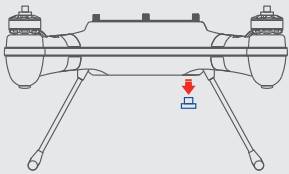
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5. Install gimbal control board between fight controller and GPS antenna corresponding location (Back of board installed 3M glue)

Gimbal controller board
Video transmitter
Gimbal
Receiver
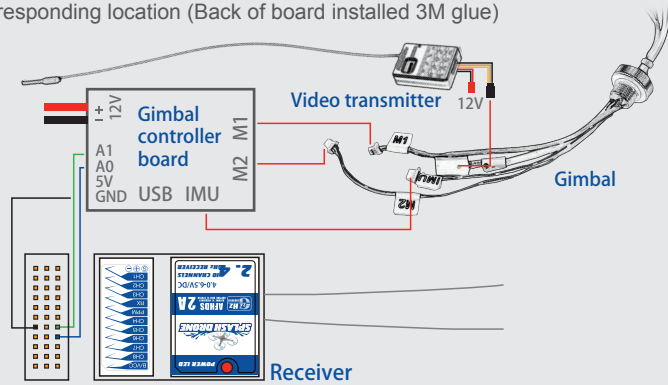
6. Install gimbal mount to the bottom of aircraft . Adjust to the correct position and use screw to lock firmly.

7. Open dive case and connect your camera AV output port to the AV cable from within the dive case
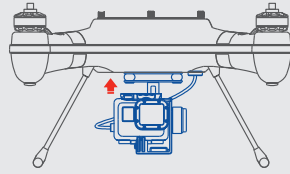
c. OPTIONAL: Payload Release Mechanism

1. Uninstall the seal screw

2. Push the payload release control cable through the hole and fix firmly with seal screw. Use screws to fix the mechanism to the body firmly.

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3. Use screw through fixed sheave, and choose a correct position lock firmly

4. Payload release control cable connects with the receiver at CH5 or CH6. (CH5 controlled by remote controller VRA. CH6 by VRB)
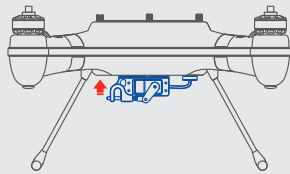
d. Propellers

1. Put aircraft on a flat level surface

2. Install the sliver nut propellers with motor marked "CCW" . and Black nut propellers with " CW " motor. ensure all propellers tighten firmly .

e. Install Battery

Put the battery inside the aircraft and install in the correct position. Ensure it is tightend firmly before starting the aircraft

4. Remote Control throttle Joystick Calibration

Calibration is needed if:
1. First time using the remote control.
2. When the joystick is in middle position. but aircraft drifts to one side.
3. Remote control crash occurs.

Throttle Calibration Process	LED Flashing
1. Turn on remote control. 2. Push throttle stick up.	
3. While holding the stick up, power on drone and wait till the blue LED flash intermittent on the drone. 3. Pull throttle stick to the lowest	
position till you see the red LED flash intermittent. NOTE: DO NOT move the trottle stick left or right, only up and down while doing this calibration.	

Power off aircraft. Push throttle stick to the top position.

While holding the throttle up, power on the drone. Pull throttle joystick to the lowest neutral position till bule LED

5. Compass Calibration

When to Calibrate
1. First time using the aircraft
2. More than 100 km from the last calibration.
3. Crash occurs
4. If aircraft parameters have been changed.
5. When aircraft shakes or has twitching motions

Compass Calibration Process	LED Flashing
1. Turn on remote control and drone till you see the red led flashing normal, then move throttle to lowest position. NOTE: DO NOT move stick left and right.	
2. Quickly move SWA fully up and down 6-10 times till the green LED fast flashes continuously. Let go of the throttle stick.	

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3. Put aircraft in a horizontal position and continuous rotate it in a clockwise motion for 2 full circles till the green LED starts flashing.	
4. Turn aircraft face down; keep the drone vertical and continuous rotate it clockwise 2 circles till red LED starts flashing.	

Image

Quickly move SWA fully up and down while holding the throttle down till the Green LED starts fast flashing

Put aircraft in horizontal position; rotate in clockwise 2 circles till green LED slow flashing

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Turn aircarft head down. rotation in clockwise 2 circles till green LED stops flashing

6. Aircarft Horizontal Position Calibration

When to Calibrate
1. First time using the aircraft
2. Drone is not flying stable
3. Aircraft sides lips
4. Aircraft Crash Occurs

Horizontal Position Calibration	LED Flashing
1. Put aircraft on a stable level surface and power on.	
2. Pull Throttle stick in lowest position. DO NOT move to sides	
3. Quickly move the right stick left and right till LED flashes Red. Release the remote control.	

Pull left joystick to the lowest neutral position, quickly left and right move the pitch joystick. till LED become Red. Blue and Green flashing.

7. FPV monitor

8. Prepare

⚠ **Notice:**
Defult remote controller is Mode 2. if need mode 1. (Check user manual)

Left Stick

Right Stick

9. Launch(Outdoor)

1. Place aircraft in an open area without buildings or trees, and keep 3-5 meters away from you and others
2. Power on the Control, then power on the Splash Drone and wait for GPS signal. (wating for GPS is optional but highly recommended)
3. Pull both sticks to their lowest corners to start up the drone
4. Slowly raise throttle stick to start flying

aircraft Tail   Start motor (Lock/Unlock I)   Left stick/rise(Slow)

⚠ **Notice:**
1. Power on aircraft, it will enter a self-check test. Please make sure there is no movement on the aircraft in this period(6-10 Seconds).
2. Aircraft satellite indications: 6 satellites - 2 red LED flashing. 7 satellite - 1 red LED flashing and over 8 satellite no red LED flashing.

We strongly recommend aircraft search over 6 satellites before starting to fly.
3. In flying process do not stop motors for any reason.

Lock/Unlock motor

Lock/Unlock II   Lock/Unlock III   Lock/Unlock IV

10. Landing(Outdoor)

1. Slowly pull down throttle stick until the aircraft lands on the ground
2. Please keep throttle stick in the lowest position for over 5 seconds to allow motors to lock after landing
3. After motor stop rotating, shut down aircraft power
4. Power off Remote controller

⚠ **Notice:**
1. Please land aircaft in an open area
2. If aircraft lands on tree or any other abnormal place, lock motors immediately to avoid motor and ESC burnout.
3. After aircarft lands on the ground keep remote controller throttle stick in lowest neutral position until motors stop rotating

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Specification

Splash Drone & Battery & Transmitter Specification

Splash Drone
Weight (Battery & Propellers Included)	1750Kg
Hover Accuracy	0. 2 m
Max Yaw Angular Velocity	30°
Max Tilt Angle	30°
Max Ascent / Descent Speed	4 m/s
Max Flight Speed	6m/s (GPS Mode)
WheelBase	450mm
Flight Time	19 Mins (4500mah)
Max Take-Off Weight	2. 5Kg
Operating Temperature	-10C°to 60C°

Battery
Battery Type	Lipo Battery
Capacity	14. 8V 4500mah
Charging Environment Range	0C°to 40C°
Charging Time	60minutes

Remote Controller
Weight	390g
Operating Frequency	2405 to 2475HMZ
Communication Distance (Open Area)	1. 0 KM
Receiver Sensitivity (1%PER)	-105dbm
Working Current/Voltage	120 mA
Battery	1. 5V AA*4
Channels	8 channels